

## REMARKS

This application has been carefully reviewed in light of the Office Action dated May 28, 2004. Claims 1 to 13, 15 and 16 are in the application, of which Claims 1 and 9 are independent. Reconsideration and further examination are respectfully requested.

Applicant confirms his election, with traverse, of the Group II claims, namely Claims 9 to 3 and 16. Traversal is based on Applicant's belief that adequate distinctness has not been demonstrated under MPEP § 806.05(c). Specifically, in entering the restriction requirement, the Office Action explained that "base claim 1 of Group I is tailored to a single scanning optical apparatus for forming [a] monochromatic image". While it is true that the scanning optical apparatus of Claim 1 is usable in an image forming apparatus that forms monochromatic images, there is nothing in Claim 1 that precludes its use in a color image forming apparatus. Accordingly, and since the elected claims of Group II are directed to a color image forming apparatus, it is respectfully submitted that distinctness has not been demonstrated.

It is therefore respectfully requested to withdraw the restriction requirement and rejoin withdrawn Claims 1 to 8 and 15. In keeping with Applicant's traversal of the restriction requirement, the claims of the withdrawn group have been amended for conformity with the elected claims.

A new drawing sheet is enclosed for Figure 6, to add a "Prior Art" legend as requested in the Office Action.

Claims 9 to 13 and 16 were rejected under 35 U.S.C. § 103(a) over U.S. Patent 5,115,256 (Miyagi) in view of U.S. Patent 5,963,356 (Kato). In addition, Claim 16 was further rejected under § 103(a) over Miyagi in view of Kato and further in view of U.S. Patent 5,889,594 (Maekawa). Reconsideration and withdrawal of these rejections are respectfully requested.

The invention of the rejected claims is directed to a color image forming apparatus which addresses the problem of magnification deviation in a main scanning direction. As described in the specification at pages 3 through 5, magnification deviation is often attributable to a chromatic aberration of magnification of a scanning optical element. To address such a magnification deviation, the present invention provides registration detection means for detecting a positional deviation in a main scanning direction of a marking of a predetermined shape formed on each of image bearing members by each scanning optical apparatus. According to one feature of the invention, the registration detection means is provided at a position corresponding to an image height separate from an optical axis of the scanning optical element, whereas the optical axis of the scanning optical element is coincident with a principal ray of the deflected beam from a deflecting element.

By virtue of the foregoing arrangement, the chromatic aberration of magnification of the scanning optical system is greatly reduced, and approaches zero, on the axis of the scanning optical system, which corresponds substantially to the center of the scanning width.

In contrast, Miyagi is unconcerned with a reduction of deviation in the main scanning direction, but rather is directed to reduction of error in the sub-scanning direction. Specifically, Miyagi theorizes that phase shifts caused by the polygonal mirror is responsible for deviations in the sub-scanning direction between horizontal scans. To address this, Miyagi provides sensors 22R and 22L, shown in Figure 5, to detect the error in distances in the sub-scanning direction between horizontal scans. See column 3, lines 39 to 59, column 8, lines 38 to 63, and column 10, line 39 to 56.

Because of Miyagi's focus on the reduction of error in the sub-scanning direction, Miyagi has nothing corresponding to Claim 9's registration detecting means for detecting a positional deviation in the main scanning direction. More specifically, Miyagi does not provide for such a registration detecting means at a position corresponding to an image height separate from the optical axis of the main scanning optical element.

Kato likewise fails to disclose or to suggest anything concerning a registration detecting means for detecting a positional deviation in the main scanning direction, as apparently conceded in the Office Action.

It is therefore respectfully submitted that Claims 9 to 13 and 16 would not have been obvious from any permissible combination of Miyagi and Kato. Allowance of these claims is therefore respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California, office by telephone at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael K. O'Neill", written over a horizontal line.

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